

## ABSTRACT

At both ends of a waveguide 43 having a plurality of cores 51, light emitting elements 47 and light receiving elements 49 are disposed so as to face end faces of the cores 51. A switch 44 is overlapped over the waveguide 43. In the switch 44, switching windows 52 each can be switched between a state where light propagating through the core 51 is passed and a state where the light is reflected and arranged in the vertical and horizontal directions, and the switching windows 52 are arranged along the top faces of the cores 51. A test board 45 having a plurality of channels 60 in each of which a metallic thin film 61 is formed is disposed over the switch 44, and receptors 62 are fixed on the metallic thin film 61 in the channels 60. A specimen containing a specific ligand is passed in each of the channels 60.